

described in three libellulid species only: *Perithemis tenera* Say (M.E. JACOBS, 1955, *Ecology* 36: 566-586), *Belonia croceipennis* (Sel.) (C.E. WILLIAMS, 1977, *Odonatologica* 6: 283-287), and in *Brachythemis lacustris* Kirby (P.L. MILLER, 1982, *Ent. mon. Mag.* 119: 177-188).

Although *T. arteriosa* is a very common African species, little is known about its behaviour. During a recent visit to Israel (February-March, 1984), some observations on this species were made, mainly on pools in Nahal Arugot. This is the southern river of Ein Gedi, a Dead Sea Oasis. The aquatic entomofauna of this area was described by D.G. FURTH (1983, *Hydrobiologia* 102: 3-25) and *T. arteriosa* was also reported from Nahal Arugot by that author.

The below observations were made on March 1, 1984, between 9 and 11 am, at the lower rockpool in the valley. This pool is fed by a waterfall, but the main body of the pool contains (semi-)stagnant water because the outflow of the water is close to the actual fall. There is no littoral vegetation, but *Chara* and filamentous algae are found abundantly. The surface area of the pool is approximately 5 x 5 m and its depth does not exceed 30 cm. The bottom consists of rock and gravel.

One male of *T. arteriosa* was nearly always present at the pool, mostly resting on the rocky edge. Whenever another male approached the pool, it was immediately dislodged by the resident male. Such aggressive contact never lasted longer than 30 sec. The resident male then returned to its original site. When a female entered the territory, it was approached by the resident male. At first, the contact very much resembled the territorial behaviour towards other males, but this lasted only few seconds. Contrary to the reaction of an invading male, which flew away when approached by the resident male, the female hovered about 20-50 cm above the water surface. The male then started a "dance", flying very fast in an "8"-shaped loop (diameter about 1 m), immediately below the female. The "8"-shape of the loop was fairly consistent. Rarely, the male described one oval loop or a circle, but immediately the original pattern was resumed. This "dance" lasted about 5 min, during which the female

COURTSHIP DISPLAY IN *TRITHEMIS ARTERIOSA* (BURM.) (ANISOPTERA: LIBELLULIDAE)

Courtship display, although abundantly documented in a number of zygopteran species, is very rare in Anisoptera (P.S. CORBET, 1980, *A. Rev. Ent.* 25: 189-217). It was thus far

moved very little. Then the male attempted to grasp the female in a tandem. When this failed, the male started to chase the female. Both flew away at high speed and were lost out of sight. They returned to the pool after 20 or 30 seconds, where the female resumed the hovering position and the male again performed "8"-shaped loops. After an earlier attempt to grasp the female, the "dance" only lasted about 30 sec before the male undertook a new attempt. This was repeated a few times.

The actual copulation was not observed. After a number of attempts, the male returned alone. It is not known whether in such cases the male lost the female or made a successful copulation.

As this report is based on two hours of observations only, it is uncertain whether the above mentioned patterns constitute the usual behaviour of this species. Nevertheless, it is considered useful to describe this behaviour here, as it is different from courtship display in other libellulids. The most important difference is no doubt the active involvement of the female in the dance.

Dr H.J. DUMONT identified the specimens and read the manuscript. The author is Research Assistant with the National Fund for Scientific Research (Belgium).

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